DOCUMENT RESUME

ED 380 816 CS 214 779

AUTHOR Rudden, Jane F.
TITLE Instruction in Metaphor and Its Influence on Revisions Made by Third- and Fifth-Graders.
PUB DATE Nov 94
NOTE 29p.; Paper presented at the Annual Meeting of the College Reading Association (38th, New Orleans, LA, November 3-6, 1994).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Elementary Education; *Elementary School Students; Grade 3; Grade 5; *Metaphors; *Revision (Written Composition); Writing (Composition); *Writing Instruction; Writing Research
IDENTIFIERS Writing Development

ABSTRACT

Research efforts in the area of metaphor have concentrated on its natural occurrence in children's language, its role in comprehension processes, and the cognitive developmental stages influencing children's interpretations of metaphor. A study considered the influence of instruction in metaphor on the revising processes of third- and fifth-graders as measured by pre- and post-treatment drafts of a writing task. Ten third- and ten fifth-graders voluntarily participated. One hour of instruction in the recognition and generation of metaphor was delivered to each group separately; the instruction was followed by a period during which the children revised their drafts. Analysis of post-treatment drafts indicate an increase in the use of metaphor in the writing samples of both groups. These findings confirm the suggestion that metaphor is a useful form of redescription (McQuade 1983) and helps writers to see things differently. All participants showed an eagerness to learn about metaphor and were outwardly pleased with successful attempts to abandon a literal expression in favor of a metaphoric counterpart. Revisions were further analyzed for type using L. Faigley and S. Witte's (1981) Revision Taxonomy. Paired "t" tests revealed no significant mean differences between groups for revision types. Semi-structured interviews revealed a preference for literal expression, with only few exceptions. (Contains 36 references, two appendixes of research materials, and three tables of data.) (Author/TB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 380 816

Instruction in Metaphor and its Influence on Revisions Made by Third- and Fifth-Graders

A Paper Presented at the Annual Conference of the
College Reading Association
November, 1994

Jane F. Rudden, Ed.D.
Elementary Reading Education
Millersville University

CS214779

Running head: METAPHOR AND REVISING

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Rudden

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

Abstract

This study considered the influence of instruction in metaphor on the revising practices of third- and fifth-graders as measured by pre- and post-treatment drafts of a writing task. Ten third- and ten fifth-graders voluntarily participated. One hour of instruction in the recognition and generation of metaphor was delivered to each group separately, followed by revising. Analysis of posttreatment drafts indicate an increase in the use of metaphor in the writing samples for both groups. Revisions were further analyzed for type using Faigley and Witte's (1981) Revision Taxonomy. Paired *t* tests revealed no significant mean differences between groups for revision types. Semi-structured interviews revealed a preference for literal expression, with few exceptions.

Instruction in Metaphor and its Influence on Revisions Made by Third- and Fifth-Graders

The composing process has been at the heart of numerous research efforts. It has been defined as a stage-process model, describing writing as a linear series of stages, separated in time (Britton, 1975). More recently, it has been viewed by researchers as a cognitive process, recursive in nature (Flower, 1985; Perl, 1979). Researchers agree (Flower & Hayes, 1981; Scardamalia & Berieter, 1983) that revision is an important part of the writing process. This is, in part, due to the belief that revisions can affect a writer's knowledge (Fitzgerald & Markham, 1987). That is, writers come to know more about what they are writing as they write and revise (Odell, 1980). In this study, revision was defined as any change made to the original text, in any or all of the categories outlined in the Taxonomy of Revisions (Faigley & Witte, 1981). These categories include surface changes, such as punctuation and spelling, and text-based changes that either preserve or change the meaning.

Research efforts in the area of metaphor have concentrated on its natural occurrence in children's language (Chamberlain & Chamberlain, 1904; Chukovsky, 1963; Gardner, 1973), its role in comprehension processes (Pearson, Raphael, TePaske, & Hyser, 1981; Robertson, 1988), and the cognitive developmental stages influencing children's interpretations of metaphor (Gardner, Kircher, Winner, & Perkins, 1975; Johnson, 1991; Winner, 1988). Investigation into the role of metaphor in revising for meaning

is found in studies focusing on the integration of metaphor into composition, both in the early stages of composing (Bloom, 1983; Peterson, 1985), and as a source that can be drawn on throughout the composing process (McQuade, 1983; Schor, 1983).

Metaphor was operationalized in this study based on Richards' (1929) landmark work, in which he states a metaphor is made up of two terms: the vehicle, that which is familiar; and the topic, that which is unfamiliar. The commonality shared by the topic and the vehicle is called the ground. Any conceptual incompatibility between the topic and the vehicle is called the tension. For example, in the metaphor "writing is a memory," the topic is writing and the vehicle is a memory. The ground of this metaphor is the commonality shared by writing and a memory; possibly a means of storing or preserving an experience for later recall. The tension results from the incompatibility (lack of shared features) of the two terms when considered literally. The noted metaphors used in the original and revised texts of the students in this study represent every incident in which two otherwise dissimilar domains were made conceptually compatible in metaphoric terms.

The purpose of this study was to examine the revisions made by third- and fifth-graders following instruction in metaphor. It was framed by the research question; how does an intervention of instruction in metaphor influence the types of revisions made by 3rd- and 5th-graders?

The merits of direct instruction have been noted in previous

research combining reading comprehension and metaphor processing (Readence, Baldwin & Head, 1986). It is thought to be a meritorious means of intervention, particularly since direct-instruction studies are rare (Fitzgerald & Markham, 1987).

METHOD

Subjects: 10 third- and 10 fifth-grade students, members of existing intact classes, voluntarily participated in this study. Their curriculum included instruction in the writing process and they completed numerous writing tasks across the school year.

Procedures: Day 1: *Pretreatment Writing Task:* Third-graders were asked to write a personal adaptation of *The Giant Jam Sandwich* (Lord, 1972). This story had been read to the class and they had written a collaborative adaptation of the story already. Fifth-graders were asked to write a description of a place they knew very well without revealing its location.

These first drafts were collected and copied to preserve all initial thoughts, format, and language. They were analyzed for presence of metaphor. Interrater reliability for the characteristics of metaphor was established prior to the analysis and found to be .94.

Treatment. Following the writing of the pretreatment drafts, approximately one hour of instruction in the identification and generation of metaphor was delivered separately to the third- and fifth-graders (see Appendix A). Instruction was based on the concept of direct explicit teaching of comprehension processes (Pearson, 1984) and metaphor theory as detailed by Ortony,

Vondruska, Foss, and Jones (1985).

Day 2: *Revising*. First drafts were returned to the students for revising. Metaphor was suggested as a revising technique. The posttreatment writing samples were collected and analyzed for presence of metaphor. All revisions to the texts were further analyzed for type (surface/text-base) using Faigley and Witte's (1981) Revision Taxonomy, by comparing the original draft with the revised draft.

Day 3: *Interviews*. Follow-up semi-structured interviews were conducted with each participant to gain insight into their decision making processes for writing and revising. Transcripts were also used to examine whether or not metaphor occurred naturally in their speech.

Data Analysis

Unpaired *t* tests were conducted to compare group means for revision types. Each instance of revision was categorized according to the Faigley and Witte (1981) Revision Taxonomy, which sorts the changes affecting meaning from those which leave meaning intact. Revisions involving metaphor were examined for their impact on changing or preserving the meaning. Interrater reliability was .89 for the categorization of revisions.

Interview data were analyzed using a phenomenological approach as described by Hycner (1985). Transcripts were segmented into units of general meaning, then idea units were determined within each unit of general meaning and coded for relevancy to the research question. All transcripts were further

inspected for naturally occurring metaphor. An independent rater was familiarized with the categories, and coded 100 idea units. Interrater reliability was .93 for the categorization of idea units and .89 for naturally occurring metaphor.

RESULTS

Unpaired *t* tests revealed no significant differences between the group means of each revision type (surface/text-base) by grade level. (See Table 1)

Insert Table 1 about here

All revisions involving metaphor were determined to be meaning-changing. (See Table 2) Third-graders used metaphor in their revisions three times, fifth-graders eleven times. Original drafts revealed four instances of simile for fifth-graders. Only one third-grader used metaphor in the original draft, comparing a friend to an uncool exterminator.

Insert Table 2 about here

Interview data revealed naturally occurring metaphor in both groups. The interview protocol (see Appendix B) was designed to probe for comparative expression and included asking each participant how they would explain "writing" to a visitor from another planet. The 5th-graders were about to begin a writing project focusing on adventure stories. Numbers 2 and 4 in Table

3 are examples of naturally occurring metaphor in their discussion of possible topics for their stories.

Insert Table 3 about here

The categories identified through the analysis of the interviews were (a) prewriting strategies, (b) audience awareness, (c) language considerations in meaning making, (d) revising with metaphor, and (e) naturally occurring metaphor. Relevant highlights from the interviews of four participants are included in the following discussion.

Prewriting Strategies. Participants were asked how they generate ideas for writing. Evidence of drawing on personal experiences and prior knowledge was seen in the comments of both the third- and fifth-graders. Rosie, a third-grader, said sometimes people give her clues about what to write. For example, when she and her sister were going somewhere and had lots of fights and her mother told them they'd have to walk home, that gave her the idea to write about fighting. Kathy is also in the third grade and she writes about her favorite place to go and get away from it all. She composes thoughts in her mind and as she begins to write her thoughts on paper, idea generation continues. "Well, I just like, I think like, okay, I like this place very much, no. I like this place very much. It has flowers and it smells nice until the dogs come."

Christina, a fifth grader who comes from a linguistically

rich Argentinean background, and a newcomer to the United States and the English language, said she thought of ideas by herself. "Okay, first decide what you're writing. Mmmm! I, uh, imagination, yeah? I'm seeing the people. I'm write this down." The myriad differences between Argentina and the U.S. were featured in her stories. Tina, also a fifth-grader, was explicit in her using prior knowledge and personal experiences as a technique for generating ideas; "Well, I usually make up names for my family and deciding sometimes I just think of something that happened to me, my future, er, my life."

Audience Awareness. Nearly all of the participants had a characteristically unique awareness of audience. The third-graders spoke of their writing in almost sacrosanct terms. Kathy identified occasions for writing with misbehavior and school. Whenever she is sent to her room because of misbehavior, she "plays school" and writes her stories. She has no audience in mind beyond herself. "So, basically, nobody reads it, I just put it back in a little closet I have." If someone did have a chance to read her stories, Kathy would like them to feel happy.

Mirroring the initial absence of audience awareness expressed by Kathy, Rosie said she had herself in mind when she wrote. What does she do with all of these stories? "I just keep them as a collection so I can save them for maybe I'll make a time capsule and put them in it." She went on to explain that she would bury the time capsule behind the apartment building where she lives, leaving half of it exposed above the ground.

She fancied "somebody will trip and they'll say, 'Oh, what was that?' And they'll think it is a rock but it is really . . . but they want to know what it is, so they'll just open it because it's not gonna be locked." As if to guarantee her immortality, Rosie would leave the time capsule as a remembrance. She said whoever she knows right now, and becomes a teacher in the future, could be told of this discovery and they would remember who she is.

The fifth graders' comments, on the other hand, revealed an awareness of an external audience. Christina would sometimes write a special story just for her niece. Though her niece is too young to read, Christina feels sure her aunt and uncle would read her the stories. She would like her audience to like her work. "For example, say, 'I like. I like very much.'" On one occasion, Christina's aunt liked her story so well, she asked to keep it. "'I like very much. Can you give that for me?' I say, 'No, because I don't have one.'" That was the only copy of the story Christina had and she couldn't part with it.

Tina was at first at a loss as to who would read her stories. When I asked if she had anybody in mind when she wrote, she said maybe her cousin would read them because "she likes books to read and stuff." How does Tina make sure her reader understands her story? ". . . just wish for the best and try and think of what I put and stuff, if I write it."

Language Considerations in Meaning Making. The participants were asked what they do when they are at a loss for the right

words to express an idea. Rosie asks somebody; either her sister, Mom, Dad, or teacher. She uses the dictionary frequently because this is a familiar routine she has learned at home when the family plays Scrabble together. Sometimes, she just uses her brain to think of words. Christina's newness to the English language has prompted her to ask for translations of Spanish into English; however, she is rarely at a loss for the correct expression.

If Tina is in the middle of a story and can't quite find the right words to say, she sometimes asks the teacher what would be a good word to fill in there. She doesn't feel she uses any special words to make sure her reader understands her stories. Kathy has a unique method for overcoming writer's block. Sometimes, when she knows what to say but can't quite find the right words to say it, she says, "Well, then, I like go to sleep for a couple minutes, then when I wake up, I get the idea." To accomplish her goal of having the reader "feel happy" when they read her work, she uses ". . . adventure words. The shark *dashed* toward the whale. The shark *raced* [italics added], or something like that." The suggestion of saying "the shark was going fast" brought a look of displeasure to her face.

Revising with Metaphor. Interview questions were intended to probe for naturally occurring metaphor in the participants' oral language. Kathy and Tina were asked directly whether or not they thought about using metaphor for revising. Kathy spontaneously began a think-aloud demonstration of revising for

metaphor using the story she'd written in response to the writing task prompt in this study. This is her think-aloud, in its entirety:

> Well, I just like, I think like, okay, I like this place very much, no. I like this place very much.] (Reads from the story she's written.) 'It has flowers and it smells nice until the dogs come.' Yeah . . . could use a metaphor. So, I'm thinking and then I go . . . well, 'I like this place very much and I think that it's fun and it has flowers. The flowers are so pretty I call it sunshine.' 'Cause the flowers are so pretty, you're sunshine when it rises in the daytime.

It is clear in this example that Kathy has begun to think of metaphor as a revising technique she can use to improve her writing.

Tina simply said she thought about metaphor as she rewrote her story and that she was willing to rewrite stories if she thought she could write better than the first version. She did use metaphor in her revisions.

Naturally Occurring Metaphor. Interview questions were designed to probe for descriptive, comparative, and figurative expressions in the participants' responses, with a specific focus on the use of metaphoric expressions. In a word, they were hard-bought. The response most natural to the participants were literal in nature and only with direct questioning did they

express themselves in comparative, descriptive, or metaphoric terms.

The clearly metaphoric expressions came from Kathy. She told me a story about her brother antagonizing her by apparently throwing a spider at her. She allowed that bugs were her biggest fear and the very thought of a spider on her sent her twirling around the room. She demonstrated this spontaneously and I asked her to describe her movements in words. She said, "Kathy was a fast, was a, was a . . . Kathy is a cheetah. I was running so fast. Kathy was a whirlwind. Kathy was a tornado." An approximation to metaphor was revealed in the midst of her answer to how she would describe writing to an alien. She referred to Martians as "little candy bars." Close inspection of this comparison reveals tension between the vehicle and the topic. This appeared to be Kathy's way of teasing and using the Mars Candy Bar name to apply to inhabitants of the planet Mars.

Rosie referred to soapsuds mounded high in the sink as "a mountain of suds." Further probing into what word she could use in place of suds, but shared a similarity with suds, prompted the response, "grass." I asked if she could think of something that wasn't green and shared a similarity with suds. She said, " a mountain of snow."

Tina found it difficult to express metaphor naturally and struggled with my request to compare her favorite TV show, *Beverly Hills, 90210*, with something similar to help me understand what the show is about. She said, "Um, Brandon has a

job and he works like a buzzing bee." Herein, the generic definition of simile might be substituted to accept this expression as metaphoric.

DISCUSSION

This study focused on the revisions made by 3rd- and 5th-graders as influenced by instruction in metaphor. No significant differences were found between group means for each revision type. Revisions involving metaphor changed the meaning of the text, according to the parameters for meaning-changing revisions as stated in the Revision Taxonomy (Faigley and Witte, 1981). Uses of metaphor were revealed in the revisions of 3 3rd-grade drafts and 6 5th-grade drafts, an increase for both groups. These findings confirm the suggestion that metaphor is a useful form of redescription (McQuade, 1983) and helps writers to see things differently. All participants showed an eagerness to learn about metaphor and were outwardly pleased with successful attempts to abandon a literal expression in favor of a metaphoric counterpart. It is reasonable to conclude that instruction in metaphor provided both groups with a technique for revising for meaning.

Though empirical evidence is sparse regarding the revising process in elementary school children, the link between direct instruction in revising and its effects in practice has been shown with sixth-graders (Fitzgerald & Markham, 1987). Other studies suggest children do not revise much (Graves 1983; Stallard, 1974). This may be partly due to a lack of mental

control to tie together their goals and intentions with the know-how to make needed changes (Scardamalia & Bereiter, 1983; Sommmers, 1980). This apparent immaturity in the area of composing, coupled with the varying degrees of metaphoric competence, add to the meaningfulness of the findings of this study.

Research focusing on the cognitive dimensions of metaphor (Billow, 1975; Winner & Gardner, 1981), suggests that, from early renaming to its adult form, the course of metaphor is not a directly linear one, but follows a U-shaped curve. Beginning at the lefthand top of the U, the preschooler's frequent use of metaphor peaks at age 3/4 and continues through age 6. The bottom of the U represents the decline in the years of middle childhood, and the righthand top of the U represents a resurfacing of metaphoric expresssion during adolescence (Pollio & Pickens, 1980; Snyder, 1979; Winner, 1988). This would lead to the expectation of few instances of metaphoric expression in the language and writing of the participants since 3rd- and 5th-graders generally range in age from 8-11 years. Pretreatment drafts confirm these findings. However, posttreatment drafts suggest that, with instruction, latent metaphoric abilities can be activated in middle elementary school children. Winner (1988) suggests that children at the literal stage have not lost the competence for metaphor. Rather, it has perhaps gone underground, and the decline is evidence of preference and performance not underlying ability. Winner further indicates

that "on a school-type task (writing a composition on an imaginative topic), elementary school children produce few metaphors, either novel or trite" (p. 106). The results of this study lend further evidence that, with training, elementary school children can be taught to produce novel metaphors (Pollio, 1973).

Interviews were incorporated into this study in an effort to enrich the data collected and analyzed quantitatively. The thought processes revealed during these interviews point to a marked difference in the stance third- and fifth-graders assume as they approach a writing task. Generally, third-graders verbalized an egocentrism in their stance. Their primary audience was themselves, they kept their stories in a hidden collection, and one participant noted she would bury them in a time capsule obvious enough to be found so that she could be remembered through her writing. Egocentrism in the writing of children up to age nine has been documented in the literature (Calkins, 1980; Graves, 1981).

Field notes taken while observing these writers as they revised also indicate looks of frustration, pleas for clarification of changing text to incorporate metaphor, and actions demonstrating they'd rather quit than try. For example, some put their drafts into their desks, others began talking to their neighbors, and some asked if they could take it home and work on it.

Fifth-graders, on the other hand, wanted their readers to

feel happy about reading their stories and showed a willingness and a determination to use metaphor to revise their drafts. Field observation notes indicate some self-consciousness in trying out metaphor, yet suggestions from peer editors and adults were openly embraced. Their confidence in transforming their original words into metaphoric terms grew, and added to their sense of pride in their work. This shift to sociocentrism in writing is revealed in their expressions of identifying external audiences for their stories.

Naturally occurring metaphor was not identified. All of the participants showed a predilection for literal explanations. Though the literature has empirically shown instances of naturally occurring metaphor in the speech of very young children, the age groups represented in this study fall within the range identified as literal critics of adult speech (Chukovsky, 1965). These children delight in criticizing figurative expressions in adults. They are parading their understanding of their language by holding adults to literal meanings. This merciless insistence admits no exceptions.

Limitations. One limitation of this study is the use of metaphors presented in isolation, without any supporting context to aid interpretation. Future research needs to include examples of metaphor within a story context as a part of the instructional procedures.

A second limitation might be the length of treatment. Longer treatment might facilitate drawing conclusions practical

for instruction and also help to draw conclusions regarding effects over time. The entire subject population was presumably in the age group that prefers literal versus figurative expressions. Perhaps significant results would be seen with a longer treatment, sustained practice over time, and a cross section of subjects representing all stages of metaphoric competence.

Future research. Should reading/writing teachers consider incorporating direct instruction in figurative language as early as the primary grades? Conventional wisdom would have teachers avoid instruction in figurative language until the intermediate grades (4-6), though it is present in their readings as early as grade one (Arter, 1976). The implications of this study suggest that instruction can facilitate the awakening of metaphor competence in elementary school children. This question bears attention at all grade and ability levels. Unequivocal conclusions cannot be drawn without further research.

Metaphor is an integral part of everyday communication and has been shown to serve a vital role for the writer (Bloom, 1983; Horton, 1982; McQuade, 1983). Despite the accepted presumption that metaphor competence in children goes underground during the middle elementary years, there is no reason children who are presumably bound by conventional modes of expression cannot be given instruction in metaphor processing. It reawakens their imaginations, draws on their delight in wordplay, and fosters the development of knowledge across diverse categories.

References

Arter, J. L. (1976). The effects of metaphor on reading comprehension. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Billow, R. M. (1975). A cognitive developmental study of metaphor comprehension. Developmental Psychology, 11, 415-423.

Bloom, L.Z. (1983). Strategic writing. New York: Random House.

Britton, J. N. (1975). The composing processes and the functions of writing. In C. R. Cooper and L. Odell (Eds.), Research on Composing: Points of Departure (pp. 13-28). Urbana, IL: National Council of Teachers of English.

Chamberlain, A., & Chamberlain, I. (1904). Studies of a child: I. Pedagogical Seminary, 11, 264-291.

Chukovsky, K. (1963). From two to five. (M. Morton, Trans.). Berkeley, CA: University of California Press. (Original work published in 1925)

Faigley, L. & Witte, S. (1981). Analyzing revision. College Composition and Communication, 33, 400-414.

Fitzgerald, J. & Markham, L. (1987). Teaching children about revision in writing. Cognition and Instruction, 4, 3-24.

Flower, L. (1985). Problem solving strategies for writers. (2nd ed.). New York: Harcourt Brace and Jovanovich.

Flower, L., & Hayes, J. (1981). A cognitive process theory of writing. College Composition and Communication, 32, 365-387.

Gardner, H. (1973). The arts and human development. New York: John Wiley.

Gardner, H., Kircher, M., Winner, E., & Perkins, D. (1975). Children's metaphoric productions and preferences. Journal of Child Language, 2, 125-141.

Graves, D. (1983). Writing: Teachers and children at work. Exeter, NJ: Heinemann.

Horton, S.R. (1982). Thinking through writing. Baltimore: Johns Hopkins University Press.

Hycner, R. H. (1985). Some guidelines for the phenomenological analysis of interview data. Human Studies, 8, 279-303.

Johnson, J. (1991). Developmental versus language-based factors in metaphor interpretation. Journal of Educational Psychology, 83, 470-483.

Lord, J. V. (1972). The giant jam sandwich. Boston, MA: Houghton Mifflin.

McQuade, D. (1983). Metaphor, thinking, and the composing process. In J. N. Hays, P.A. Roth, J.R. Ramsey and R. D. Foulke (Eds.), The Writer's Mind. Urbana, Ill: National Council of Teachers of English.

Odell, L. (1980). Business writing: Observations and implications for teaching compositions. Theory Into Practice, 19, 225-232.

Ortony, A., Vondruska, R. J., Foss, M. A., & Jones, L. E. (1985). Salience, similes, and the asymmetry of similarity (Tech. Rep. N. 332). Urbana: University of Illinois, Center for the Study of Reading.

Pearson, P. D. (1984). Direct explicit teaching of reading comprehension. In G. G. Duffy, L. R. Roehler, & J. Mason (Eds.), Comprehension instruction: Perspectives and suggestions (pp. 222-233). New York: Longman.

Pearson, P. D., Raphael, T. E., TePaske, N., & Hyser, C., (1981). The function of metaphor in children's recall of expository passages. Journal of Reading Behavior, 13, 249-260.

Perl, S. (1979). The composing processes of unskilled writers. Research in the Teaching of English. 13, 317-337.

Peterson, L. (1985). Repetition and metaphor in the early stages of composing. College Composition and Communication, 36, 429-443.

Pollio, M. (1973). The development and augmentation of figurative language. Unpublished doctoral dissertation, University of Tennessee.

Pollio, M., & Pickens, J. (1980). The developmental structure of figurative competence. In R. Honeck and R. Hoffman (Eds.), Cognition and figurative language. Hillsdale, NJ: Erlbaum.

Readance, J. E., Baldwin, R. S., Head, M. H. (1986). Direct instruction in processing metaphors. Journal of Reading Behavior, 18, 325-339.

Richards, I. A., (1929). Practical criticism. New York: Harcourt, Brace.

Robertson, C. S. (1988). The role of metaphor in comprehension processes. Unpublished doctoral dissertation. The Ohio State University.

Scardamalia, M., & Bereiter, C. (1983). The development of evaluative, diagnostic, and remedial capabilities in children's composing. In M. Martlew (Ed.), The psychology of written language: A developmental approach, (pp. 67-95). London: Wiley.

Schor, S. (1983). Revising: The writer's need to invent and express relationships. In J. N. Hays, P. A. Roth, J. R. Ramsey and R. D. Foulke (Eds.), The writers mind: Writing as a mode of thinking. Urbana, Ill: National Council of Teachers of English.

Snyder, J. (1979). The spontaneous production of figurative language and word play in grade school years. Unpublished doctoral dissertation, Boston University.

Sommers, N. (1980). Revision strategies of stu writers and experienced adult writers. College Composition and Communication, 13, 378-388.

Stallard, C. K. (1974). An analysis of writing behavior of good student writers. Research in the Teaching of English, 8, 206-218.

Winner, E. (1988). The point of words: Children's understanding of metaphor and irony. Cambridge, MA: Harvard University Press.

Winner, E., & Gardner, H. (1981). The development of metaphoric operations (Grant No. G-78-0031). Washington, DC: National Institute of Education.

Appendix A

Practice Sheets and Sample Metaphors Used During Treatment

I. Sample Metaphors: Whole Group

A. The eyes are the windows of the heart.

B. The doctor is the hospital's repairman.

C. The marshmallow clouds floated high in the sky.

D. We climbed the ladder of Price Street.

E. The car's tires were worn out sneakers.

II. Sample Metaphors: Partners

A. Trees are the drinking straws for budding leaves.

B. The bald man has a barefoot head.

C. A mint candy makes a draft in your mouth.

D. My hair is spaghetti today.

III. Revise these sentences by incorporating metaphor.

A. I looked into the window of the house.

B. She looked sad yesterday.

C. My Dad's slacks are baggy.

D. The soapsuds were mounded high in the sink.

E. The hummingbird hovered over the flower.

Appendix B

Interview Protocol

I want to understand how you go about writing a story and what you do to make sure that whomever reads your story understands it. Can I ask you some questions about your story writing?

1. How do you decide what to write about?
2. Whom do you think will read your story?
3. How would you like the reader to feel about what you write?
4. Do you do something special when you write so the reader knows what you're talking about? Tell me about it . . .
5. Sometimes do you have something to say but can't quite find the words to say it?
6. What do you do then? What kinds of words (or examples) would you use to make sure your reader gets your message or understands your story?
7. Pretend a spaceship landed in the school parking lot and aliens peeked through the windows of your classroom. They saw your whole class sitting at desks, leaning over a piece of paper and making scribbles with a long, skinny stick. You invite them inside and they ask, "What are you doing?" Everyone shouts, "We're writing!"
   "What's writing?" they ask, scratching their antennae.
   How would you explain writing to these aliens?

*Table 1. Means of Each Revision-Type by Group (standard deviations in parentheses)**

	Third	*Fifth*
Surface / Formal Changes		
Spelling	*1.3 (2.214)*	*.3 (.949)*
Punctuation	*.5 (1.581)*	*.5 (1.269)*
Tense, Number	*.1 (.316)*	
Format	*.9 (2.514)*	*.3 (.949)*
Surface / Meaning-Preserving		
Additions	*.3 (.483)*	*.1 (.316)*
Deletions	*.3 (.675)*	*.5 (.707)*
Substitutions	*.2 (.422)*	*.3 (.949)*
Distributions		*.1 (.316)*
Consolidations		*.10 (.316)*
Text-base / Microstructure		
Additions	*.7 (.823)*	*.2 (.422)*
Deletions	*.8 (1.033)*	*.1 (.316)*
Substitutions	*1.1 (1.595)*	*.4 (.699)*
Permutations		*.1 (.316)*
Text-base / Macrostructure		
Additions	*.2 (.632)*	*.8 (1.135)*
Deletions	*.1 (.316)*	*.1 (.316)*
Substitutions	*.2 (.422)*	*.5 (.972)*
Permutations		*.4 (.699)*

* *No significant differences shown*

Table 2. Examples of Revising with Metaphor (Metaphoric Expressions Underlined)

PRETREATMENT	POSTTREATMENT
THIRD GRADERS	
The girl did not want to be in the hot day so she went in to a hot room.	The girl was a sizzling firebox from the hot day.
My friend had been an uncool exterminator.	No change
My kittykat ran away.	My furball ran away.
And so I caught the rat and that was that.	And so I caught the rugged fur just like that.
FIFTH-GRADERS	
There is a big fluffy rat there that has a tail as soft as yarn. Plus the rat is as gentle as a kitten.	No change
The outside of it will protect us from the rain and snow.	(of a secret hiding place covered with pine boughs) The outside is a blanket to protect us from rainy weather.
	(of China) The shape of this country is a chicken. The population of this country is a stars filled sky. (Explained stars filled meant crowded.)
Some people were white water rafting.	(seen from atop the Grand Canyon) people that were leaves twirling in the white water.
It's white as a snow with jems shining like mirrors.	(of the Taj Mahal) jems that are shining mirrors
Blue, light and dark high above the floor black and white beneath	(of her bed) It is a dark and light blue sea. It is a mountain above the floor. Beneath is a black and white belly.
It stretches across China. It is the only thing in the world that can be seen in space. It curls like a sleeping dragon.	(of the Great Wall) It is a big stretching river. From space . . . it is a crack in the wall. It is a big curling sleeping dragon.

BEST COPY AVAILABLE

Table 3. Examples of Spoken Metaphor

THIRD GRADERS
1. Writing is talking on a piece of paper.
2. Writing is seeing the story in your mind.
3. Writing is talking. A letter is your voice.
4. Writing is your ticket to the next grade. If you slop anything down, the teacher will make you repeat the same grade.
5. I: How would you decide what to write about? S: I go from the highest dog down to the lowest dog. Pi-Pi was our highest dog. I: What do you mean, highest? S: Like the oldest. The lowest is the youngest.
6. Writing is a reminder. Writing is a memory.
FIFTH GRADERS
1. French fries are sticks sticking out of a tree.
2. The Titanic was an iceberg slipping into the water.
3. Pizza is a circle of food. Pizza is a tomato frisbee.
4. The plane was a silver dinosaur to the little girl.